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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,785	10/21/2003	William K. Dail	060507-1054	7567
26371	7590	01/25/2006	EXAMINER	
FOLEY & LARDNER LLP			JIANG, CHEN WEN	
777 EAST WISCONSIN AVENUE			ART UNIT	
SUITE 3800			PAPER NUMBER	
MILWAUKEE, WI 53202-5308			3744	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,785

Applicant(s)

DAIL, WILLIAM K.

Examiner

Chen-Wen Jiang

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-32 and 34-43 is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. The amendments and arguments presented by the applicant have been duly noted. However, an update search and further review of the prior art of record has prompted the presentation of new rejections presented below. In view of such, the previous rejections in the first office action have been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1,2,4-9,24-32,34-37 and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al. (U.S. Patent Number 4,344,296) in view of Rutishauser et al. (U.S. Patent Number 3,210,957).

In regard to claims 1,2,4-7,24,27-32,34-37 and 39-43 Staples et al. disclose an efficient second stage cooling system. Referring to Fig.1, the system comprises a refrigeration device with

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compressor 8, condenser 14, expansion device 18 and evaporator 22, a cooling system with conduits 30,32 and second refrigerant, heat exchanger 4 within the storage area 2 and heat exchanger 24. However, Staples et al. does not disclose modular unit. Rutishauser et al. discloses modular heat exchanger unit 12 with different capacity can be inserted or removed in the same field of endeavor for the purpose of cooling requirement. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Staples et al. with a modular unit in view of Rutishauser et al. so as to arrange the cooling requirement.

In regard to claims 8,9,25 and 26, the location of the modular element is a design choice.

Under the principals of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *Ir re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986).

4. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al. and Rutishauser et al. as applied to claim 1 above, and further in view of Wolff et al. (U.S. Patent Number 5,924,297).

In regard to claim 3, Wolff et al. disclose that there has been development work in utilizing non-compressible liquid chemical coolants (so called "glycol-type" systems using glycol or ethylene solutions or some other secondary heat transfer liquid) with control valves for producing the merchandiser cooling effect.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al. and Rutishauser et al. as applied to claim 1 above, and further in view of Norton (U.S. Patent Number 4,501,126) or Morrison et al. (U.S. Patent Number 4,493,010).

Staples et al. and Rutishauser et al. disclose the invention substantially as claimed. However, Staples et al. and Rutishauser et al. do not disclose quick disconnect device. Norton and Morrison et al. disclose quick disconnect device in the same field of endeavor for the purpose of connect/disconnect evaporator. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Staples et al. and Rutishauser et al. with a quick disconnect device in view of Norton or Morrison et al. so as to have quick connection.

6. Claims 12 and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al. and Rutishauser et al. in view of Wolff et al. (U.S. Patent Number 5,924,297).

In regard to claims 12,14-18 and 21, Referring to Fig.1, of Staples et al., the system comprises a refrigeration device with compressor 8, condenser 14, expansion device 18 and evaporator 22, a cooling system with conduits 30,32 and second refrigerant, heat exchanger 4 within the storage area 2 and heat exchanger 24. Rutishauser et al. discloses modular heat exchanger unit 12 with different capacity can be inserted or removed in the same field of endeavor for the purpose of cooling requirement. Wolff et al. disclose that there has been development work in utilizing non-compressible liquid chemical coolants (so called "glycol-type" systems using glycol or ethylene solutions or some other secondary heat transfer liquid) with control valves for producing the merchandiser cooling effect.

In regard to claims 19 and 20, the location of the modular element is a design choice.

In regard to claim 22, the fin-coil heat exchanger is an existing heat exchanger in the prior art.

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al. and Rutishauser et al. in view of Wolff et al. (U.S. Patent Number 5,924,297).

Wolff et al. disclose that there has been development work in utilizing non-compressible liquid chemical coolants (so called "glycol-type" systems using glycol or ethylene solutions or some other secondary heat transfer liquid) with control valves for producing the merchandiser cooling effect.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples et al., Rutishauser et al. and Wolff et al. as applied to claim 12 above, and further in view of Wolff et al. as applied to claim 1 above, and further in view of Norton (U.S. Patent Number 4,501,126) or Morrison et al. (U.S. Patent Number 4,493,010).

Staples et al., Rutishauser et al. and Wolff et al. disclose the invention substantially as claimed. However, Staples et al., Rutishauser et al. and Wolff et al. do not disclose quick disconnect device. Norton and Morrison et al. disclose quick disconnect device in the same field of endeavor for the purpose of connect/disconnect evaporator. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Staples et al., Rutishauser et al. and Wolff et al. with a quick disconnect device in view of Norton or Morrison et al. so as to have quick connection.

Allowable Subject Matter

9. Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

